

STIC Search Report Biotech-Chem Library

STIC Database Tracking Number: 156375

TO: Rei-Tsang Shiao Location: 5a10 / 5c18 Tuesday, June 28, 2005

Art Unit: 1626

Phone: 571-272-0707

Serial Number: 09 / 653563

From: Jan Delaval

Location: Biotech-Chem Library

Remsen 1a51

Phone: 571-272-2504

jan.delaval@uspto.gov

Search Notes	



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Acce	ss DBII		_

SEARCH REQUEST FORM Scientific and Technical Information Center Requester's Full Name: KODETT & Phone Number 20 Mail Box and Bldg Room Location: Results Format Preferred terreles: PAPER BISK E-MAIL If more than one search is submitted, please prioritize searches in order of need. Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched Include the elected species or structures, keywords, synonyms, aeronyms, and registry numbers, and combine with the concept or unday of the invention. Define any terms that may have a special meaning. Give examples of relevant citations, authors, co., if Energy Please attach a copy of the cover sheet, pertinent claims, and abstract. Title of Invention: Earliest Priority Filing Date: *For Sequence Searches Only * Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the X RI, KZ, RS, R que sub

August 1997		
STAFF USE ONLY	Type of Search	Vendors and cost where applicable
Searcher:	NA Sequence (#)	STN
Searcher Phone #: 22504	AA Sequence (#)	Dialog
Searcher Location.	Structure (#)	Questel/Orbit
Date Searcher Picked Up (e/28/06	Bibliographic	Dr.Link
rate Completed: Le 126/05	Litigation	Lexis/Nexis
Searcher Prep & Review Time:	Fulltext	Sequence Systems
Terical Prep Time , 20	Patent Family	WWW/Internet
Online Leter +35	Other	Other (specify)
P10 : \$90 cs (6)		

=> fil reg FILE 'REGISTRY' ENTERED AT 15:44:05 ON 28 JUN 2005 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT. PLEASE SEE "HELP USAGETERMS" FOR DETAILS. COPYRIGHT (C) 2005 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 27 JUN 2005 HIGHEST RN 853049-67-9 DICTIONARY FILE UPDATES: 27 JUN 2005 HIGHEST RN 853049-67-9

New CAS Information Use Policies, enter HELP USAGETERMS for details.

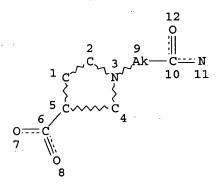
TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at: http://www.cas.org/ONLINE/DBSS/registryss.html

=> d sta que 161 L5 STR



NODE ATTRIBUTES: DEFAULT MLEVEL IS ATOM DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC 3
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE

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L7
           2808 SEA FILE=REGISTRY SSS FUL L5
                STR
L60
                     12
                                         13
                                                           18
                                                                      Cy @21
                     0
                                                          G2
                9
                                                         Ń-∕~ G2
                     C:
                        - G1
                                 @16
                                      15 14
                                                   @20
                                                       17 19
                     10 11
HO----
VAR G1=16/20
VAR G2=AK/21
NODE ATTRIBUTES:
CONNECT IS M1
               RC AT
CONNECT IS M1
               RC AT
CONNECT IS M1
               RC AT
                       13
CONNECT IS M1
               RC AT
                       14
CONNECT IS M1
               RC AT
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED
GRAPH ATTRIBUTES:
RSPEC
       3
NUMBER OF NODES IS
STEREO ATTRIBUTES: NONE
             22 SEA FILE=REGISTRY SUB=L7 CSS FUL L60
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100.0% PROCESSED
                   2659 ITERATIONS
SEARCH TIME: 00.00.01
=> d his
      (FILE 'HOME' ENTERED AT 15:11:53 ON 28 JUN 2005)
                SET COST OFF
     FILE 'REGISTRY' ENTERED AT 15:12:09 ON 28 JUN 2005
L1
                 STR
L2
              0 S L1 CSS
                 STR L1
L3
L4
               1 S L3
                 STR L3
L5
             38 S L5
L6
           2808 S L5 FUL
L7
                 SAV L7 SHIAO653/A
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               6 S (US94-293349# OR US94-334717# OR US95-442575# OR US95-497998#
L8
               1 S US2000-653563#/AP,PRN
L9
                 E WINN M/AU
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L10

155 S E3-E9,E13 E BOYD S/AU

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101 S E3,E4
L11
                E BOYD STEVE/AU
L12
              60 S E4,E5
                E HUTCHINS C/AU
L13
             70 S E3, E10, E13, E16, E17
                E JAE H/AU
L14
              43 S E5,E13,E14
                E TASKER A/AU
L15
              63 S E3, E8, E9
                E ON GELDERN T/AU
                E VON GELDERN T/AU
L16
             92 S E3-E8
                E VONGELDERN T/AU
L17
              3 S E4.
                E GELDERN T/AU
L18
              1 S E4
                E KESTER J/AU
L19
              25 S E3,E11-E14
                E SORENSEN B/AU
L20
             16 S E3,E8
L21
             40 S E46
                E SZCZEPANKIEWICZ B/AU
L22
             43 S E4-E7
                E HENRY K/AU
                E SZCZEPANKIEWICZ B/AU
L23
              1 S E2
                E HENRY K/AU
L24
             15 S E3, E7
L25
             34 S E35,E37-E39
                E LIU G/AU
L26
            843 S E3-E29
                E LIU GANG/AU
L27
            869 S LIU GANG?/AU
                E WITTENBERGER S/AU
L28
             61 S E4-E8
                E KING S/AU
L29
             54 S E3, E4
                E KING STEVE/AU
L30
             71 S E3, E4, E7-E9
                E JANUS T/AU
L31
             15 S E4, E6, E7
                E PADLEY R/AU
L32
             28 S E4-E6
                E ABBOT/PA,CS
L33
            147 S E3, E4
                E ABBOTT/PA,CS
           8778 S E3,E4
L34
L35
            197 S L7
L36
              1 S L9 AND L35
L37
             54 S L8-L34 AND L35
L38
             54 S L36, L37
L39
              0 S L38 AND (PY<=1994 AND PRY<=1994 OR AY<=1994)
L40
              6 S L35 AND (PY<=1994 AND PRY<=1994 OR AY<=1994)
L41
             10 S L35 AND (PY<=1995 AND PRY<=1995 OR AY<=1995)
L42
              3 S L38 AND L41
L43
              7 S L41 NOT L42
L44
              2 S L43 NOT 74/SC,SX
L45
              4 S L36, L42
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FILE 'REGISTRY' ENTERED AT 15:34:48 ON 28 JUN 2005

FILE 'HCAPLUS' ENTERED AT 15:35:13 ON 28 JUN 2005 SET SMARTSELECT ON SEL L45 1- RN : 2839 TERMS L46 SET SMARTSELECT OFF FILE 'REGISTRY' ENTERED AT 15:35:15 ON 28 JUN 2005 L47 2839 S L46 2273 S L7 AND L47 L48 FILE 'HCAPLUS' ENTERED AT 15:36:19 ON 28 JUN 2005 SET SMARTSELECT ON SEL L36 1- RN : 669 TERMS L49 SET SMARTSELECT OFF FILE 'REGISTRY' ENTERED AT 15:36:20 ON 28 JUN 2005 669 S L49 L51 287 S L7 AND L50 L52 0 S L1 CSS SAM SUB=L7 L53 7 S L1 CSS FUL SUB=L7 SAV L53 SHIAO653A/A FILE 'HCAOLD' ENTERED AT 15:38:25 ON 28 JUN 2005 L54 0 S L53 FILE 'HCAPLUS' ENTERED AT 15:38:30 ON 28 JUN 2005 L55 3 S L53 S L55 AND L1-L34 FILE 'REGISTRY' ENTERED AT 15:38:43 ON 28 JUN 2005 FILE 'HCAPLUS' ENTERED AT 15:38:44 ON 28 JUN 2005 L56 2 S L55 AND L8-L34 E HWAN SOO/AU L57 1 S E5 E HWAN S/AU L58 2 S L56, L57 FILE 'USPATFULL, USPAT2' ENTERED AT 15:39:58 ON 28 JUN 2005 L59 0 S L53 FILE 'REGISTRY' ENTERED AT 15:40:17 ON 28 JUN 2005 L60 STR L1 L61 22 S L60 CSS FUL SUB=L7 SAV L61 SHIAO653B/A FILE 'HCAOLD' ENTERED AT 15:43:06 ON 28 JUN 2005 L62 0 S L61 FILE 'HCAPLUS' ENTERED AT 15:43:08 ON 28 JUN 2005 L63 3 S L61 2 S L63 AND L8-L34, L56-L58 L64 L65 1 S L63 NOT L64 FILE 'USPATFULL, USPAT2' ENTERED AT 15:43:54 ON 28 JUN 2005 L66 0 S L61

FILE 'REGISTRY' ENTERED AT 15:44:05 ON 28 JUN 2005

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L61 ANSWER 1 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 697767-60-5 REGISTRY

ED Entered STN: 23 Jun 2004

CN 3-Pyrrolidinecarboxylic acid, 4-(5-benzofuranyl)-1-[2-[(1,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C36 H34 N2 O5

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:16897

L61 ANSWER 2 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-32-4 REGISTRY

ED Entered STN: 31 Mar 2002

FS STEREOSEARCH

MF C33 H39 N3 O7 . C2 H4 O2

SR CA

LC STN Files: CA, CAPLUS

CM :

CRN 403614-31-3 CMF C33 H39 N3 O7

CM 2

CRN 64-19-7 CMF C2 H4 O2

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 3 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-31-3 REGISTRY

ED Entered STN: 31 Mar 2002

CN 1-Pyrrolidineacetic acid, 4-(1,3-benzodioxol-5-yl)-3-carboxy-2-[4-(2-methoxyethoxy)phenyl]-, α -[2-(1,1-dimethylethyl)-2-phenylhydrazide], (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C33 H39 N3 O7

CI COM

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 4 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-30-2 REGISTRY

ED Entered STN: 31 Mar 2002

CN 1-Pyrrolidineacetic acid, 4-(1,3-benzodioxol-5-yl)-3-carboxy-2-[4-(2-propoxyethoxy)phenyl]-, α -[2-(1,1-dimethylethyl)-2-phenylhydrazide], (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C35 H43 N3 O7

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 5 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-29-9 REGISTRY

ED Entered STN: 31 Mar 2002

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C41 H46 N2 O7 . C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 246853-83-8 CMF C41 H46 N2 O7 Relative stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 6 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-26-6 REGISTRY

ED Entered STN: 31 Mar 2002

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)-rel-, trifluoroacetate (5:1) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C38 H40 N2 O7 . 1/5 C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 246853-81-6 CMF C38 H40 N2 O7

CM 2

CRN 76-05-1 CMF C2 H F3 O2

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 7 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 403614-24-4 REGISTRY

ED Entered STN: 31 Mar 2002

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, trifluoroacetate (5:2) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C36 H36 N2 O6 . 2/5 C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 246853-46-3 CMF C36 H36 N2 O6

CM 2

CRN 76-05-1 CMF C2 H F3 O2

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

L61 ANSWER 8 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-85-0 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C38 H40 N2 O7

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry. Rotation (+).

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 9 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-83-8 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C41 H46 N2 O7

CI COM

SR CA

LC STN Files: CA, CAPLUS

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

REFERENCE 2: 131:286357

L61 ANSWER 10 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-82-7 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-mathyll)mathyll]] 2 [4, [2, /1]]

methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C40 H44 N2 O7

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 11 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-81-6 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C38 H40 N2 O7

CI COM

SR CA

LC STN Files: CA, CAPLUS

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

REFERENCE 2: 131:286357

L61 ANSWER 12 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-66-7 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-ethylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C38 H40 N2 O6 . C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 246853-65-6 CMF C38 H40 N2 O6

CM 2

CRN 76-05-1 CMF C2 H F3 O2

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 13 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-65-6 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-ethylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C38 H40 N2 O6

CI COM

SR CA

L61 ANSWER 14 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-64-5 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C37 H38 N2 O6 . C2 H F3 O2

SR CA

LC STN Files: CA, CAPLUS

CM 1

CRN 246853-63-4 CMF C37 H38 N2 O6

CM 2

CRN 76-05-1 CMF C2 H F3 O2

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 15 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-63-4 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C37 H38 N2 O6

CI COM

SR CA

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

L61 ANSWER 16 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-61-2 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2,5-

dimethylphenyl)phenylmethyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-,
(2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C36 H36 N2 O6

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 17 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-60-1 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-2-(4-methoxyphenyl)1-[2-[[(2-methylphenyl)phenylmethyl]amino]-2-oxoethyl]-, (2R,3R,4S)-rel(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C35 H34 N2 O6

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 18 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-58-7 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(2,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C35 H34 N2 O6

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 19 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-57-6 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(1,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C35 H34 N2 O6

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 20 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-55-4 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(diphenylmethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C34 H32 N2 O6

SR CA

LC STN Files: CA, CAPLUS

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 131:286357

L61 ANSWER 21 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-53-2 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylphenyl)methylphenyl)methylphenyl

methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)- (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C40 H44 N2 O7

SR CA

LC STN Files: CA, CAPLUS

Absolute stereochemistry. Rotation (+).

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

jan delaval - 28 june 2005

REFERENCE 1: 131:286357

L61 ANSWER 22 OF 22 REGISTRY COPYRIGHT 2005 ACS on STN

RN 246853-46-3 REGISTRY

ED Entered STN: 09 Nov 1999

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-,

(2R, 3R, 4S) -rel - (9CI) (CA INDEX NAME)

FS STEREOSEARCH

MF C36 H36 N2 O6

CI COM

SR CA

LC STN Files: CA, CAPLUS

Relative stereochemistry.

PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 136:232311

REFERENCE 2: 131:286357

=> fil hcaplus

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> => d all hitstr 165

- L65 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
- 2004:322089 HCAPLUS AN
- DN141:16897
- EDEntered STN: 21 Apr 2004
- Chemical Function Based Pharmacophore Generation of Endothelin-A Selective TIReceptor Antagonists
- ΑU Funk, Oliver F.; Kettmann, Viktor; Drimal, Jan; Langer, Thierry
- CS Department of Pharmaceutical, Chemistry Institute of Pharmacy, University of Innsbruck, Innsbruck, A-6020, Austria
- SO Journal of Medicinal Chemistry (2004), 47(11), 2750-2760 CODEN: JMCMAR; ISSN: 0022-2623
- PB American Chemical Society
- DTJournal
- LA English
- CC 1-3 (Pharmacology)
- AΒ Both quant. and qual. chemical function based pharmacophore models of endothelin-A (ETA) selective receptor antagonists were generated by using the two algorithms HypoGen and HipHop, resp., which are implemented in the Catalyst mol. modeling software. The input for HypoGen is a training set of 18 ETA antagonists exhibiting IC50 values ranging between 0.19 nM and 67 μM. The best output hypothesis consists of five features: two hydrophobic (HY), one ring aromatic (RA), one hydrogen bond acceptor (HBA), and one neq. ionizable (NI) function. The highest scoring Hip Hop model consists of six features: three hydrophobic (HY), one ring aromatic (RA), one hydrogen bond acceptor (HBA), and one neq. ionizable (NI). It is the result of an input of three highly active, selective, and structurally diverse ETA antagonists. The predictive power of the quant. model could be approved by using a test set of 30 compds., whose activity values spread over 6 orders of magnitude. The two pharmacophores were tested according to their ability to extract known endothelin antagonists from the 3D mol. structure database of Derwent's World Drug Index. Thereby the main part of selective ETA antagonistic entries was detected by the two hypotheses. Furthermore, the pharmacophores were used to screen the Maybridge database. Six compds. were chosen from the output hit lists for in vitro testing of their ability to displace endothelin-1 from its Two of these are new potential lead compds. because they are structurally novel and exhibit satisfactory activity in the binding assay. pharmacophore endothelin A receptor binding structure screening drug design; Maybridge database screening algorithm pharmacophore endothelin A
- receptor antagonist; mol modeling endothelin A receptor antagonist QSAR prediction
- IT Computer program

(Catalyst mol. modeling; chemical function bsed pharmacophore generation of endothelin-A selective receptor antagonists)

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ΙT
     Algorithm
        (HipHop; chemical function bsed pharmacophore generation of endothelin-A
        selective receptor antagonists)
IT
     Algorithm
        (HypoGen; chemical function bsed pharmacophore generation of endothelin-A
        selective receptor antagonists)
ΙT
        (Maybridge; chemical function bsed pharmacophore generation of
        endothelin-A selective receptor antagonists)
IT
     Drug design
     Drug screening
     Molecular modeling
     Pharmacophores
     QSAR (structure-activity relationship)
        (chemical function bsed pharmacophore generation of endothelin-A selective
        receptor antagonists)
IT
     Structure-activity relationship
        (receptor-binding, endothelin-A; chemical function bsed pharmacophore
        generation of endothelin-A selective receptor antagonists)
IT
     Endothelin receptors
     RL: BSU (Biological study, unclassified); BIOL (Biological study)
        (type ETA; chemical function bsed pharmacophore generation of endothelin-A
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     123626-67-5, Endothelin-1
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RE.CNT
              THERE ARE 66 CITED REFERENCES AVAILABLE FOR THIS RECORD
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- IT 697767-60-5
 - RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 - (chemical function bsed pharmacophore generation of endothelin-A selective receptor antagonists)

RN 697767-60-5 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(5-benzofuranyl)-1-[2-[(1,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.

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=> d all hitstr 164 tot
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L64 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
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AN 2002:171682 HCAPLUS

DN 136:232311

ED Entered STN: 08 Mar 2002

TI Preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-carboxylic acid derivatives as endothelin antagonists

IN Winn, Martin; Boyd, Steven A.; Hutchins, Charles W.; Hwan-Soo, Jae; Tasker, Andrew S.; Von Geldern, Tomas W.; Kester, Jeffrey; Sorensen, Bryan K.; Szczepankiewicz, Bruce G.; Henry, Kenneth; Liu, Gang; Wittenberger, Steven J.; King, Steven A.; Janus, Todd J.; Padley, Robert J.

PA Abbott Laboratories, USA

SO PCT Int. Appl., 817 pp. CODEN: PIXXD2

DT Patent

LA English

LA English

IC ICM A61K031-4025 ICS A61P009-12; C07D405-04

CC 28-16 (Heterocyclic Compounds (More Than One Hetero Atom)) Section cross-reference(s): 1, 63

FAN.CNT 1

W: CA, JP, MX

RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,

PT, SE, TR

PRAI US 2000-653563 A 20000831 <--

CLASS

jan delaval - 28 june 2005

GI

AB Title compds. [I; n = 0; Z = CH2; R = CO2H; R1 = alkoxyaryl, alkoxyalkoxyaryl, heterocyclylalkyl; R2 = 1,3-benzodioxyl, 4-benzofuranyl, 5-indanyl; R3 = R4R5CO; R4 = R6R7N, R8R9NNH; R5 = methylene; one of R6, R7 is H, the other is arylalkyl, diarylalkyl; one of R8, R9 is alkyl, the other is aryl] stereoisomers, and pharmaceutically acceptable salts are prepared as endothelin antagonists. Thus, the title compound II was prepared from Et (4-methoxybenzoyl)acetate, 5-(2-nitrovinyl)-1,3-benzodioxol, ethyldiisopropylamine, and N-Pr bromoacetamide and was in vitro tested for binding effect to the endothelin receptor and the determination of title compound as

functional ET antagonist.

ST benzodioxolyl aminocarbonylmethylpyrrolidinecarboxylic acid prepn endothelin antagonist; oxopyrimidinylethyl benzodioxolyl aminocarbonylmethylpyrrolidinecarboxylic acid prepn endothelin antagonist; indanyl aminocarbonylmethylpyrrolidinecarboxylic acid prepn endothelin antagonist; benzofuranyl aminocarbonylmethylpyrrolidinecarboxylic acid prepn endothelin antagonist

IT Endothelin receptors

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)

II

(preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-carboxylic acid derivs. as endothelin antagonists)

IT 116243-73-3, Endothelin

RL: BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-

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     195708-83-9P
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     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
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     (Uses)
        (preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-
        carboxylic acid derivs. as endothelin antagonists)
IT
     66-77-3, Naphthalene-1-carboxaldehyde 66-99-9, Naphthalene-2-
                      75-64-9, reactions 78-39-7, Triethyl orthoacetate
     carboxaldehyde
                                   79-30-1, Isobutyryl chloride
     79-03-8, Propionyl chloride
                                                                    94-02-0,
                            96-48-0, \gamma-Butyrolactone
     Ethyl benzoylacetate
                                                       98-10-2,
     Benzenesulfonamide
                          99-66-1, 2-Propylpentanoic acid
                                                            100-06-1
     100-52-7, Benzaldehyde, reactions
                                         100-69-6, 2-Vinylpyridine
                                                                       103-71-9,
                                   106-41-2, 4-Bromophenol
     Phenyl isocyanate, reactions
                                                                107-03-9,
                      107-10-8, Propylamine, reactions
     1-Propanethiol
                                                          107-86-8,
     3-Methyl-2-butenal
                          107-87-9, 2-Pentanone
                                                   108-10-1,
                            109-73-9, n-Butylamine, reactions
     4-Methyl-2-pentanone
                                                                  109-90-0, Ethyl
                111-36-4, Butyl isocyanate
     isocyanate
                                                111-92-2, Dibutylamine
     120-14-9, 3,4-Dimethoxybenzaldehyde
                                            120-57-0, Piperonal
                                                                   123-08-0,
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141-75-3, Butyryl chloride

141-97-9, Ethyl

4-Hydroxybenzaldehyde 123-11-5, 4-Methoxybenzaldehyde, reactions

123-19-3, 4-Heptanone

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142-84-7, Dipropylamine 144-48-9, Iodoacetamide
acetoacetate
                    455-88-9, 2-Fluoro-5-nitrotoluene
328-38-1, D-Leucine
                                                         455-91-4
459-46-1, 4-Fluorobenzyl bromide 459-57-4, 4-Fluorobenzaldehyde
496-16-2, 2,3-Dihydrobenzofuran 527-69-5, 2-Furoyl chloride
                     542-69-8, 1-Iodobutane
Ethyl chloroformate
                                              574-98-1
                                                         590-86-3,
Isovaleraldehyde
                  591-20-8, 3-Bromophenol
                                           591-31-1,
3-Methoxybenzaldehyde 592-55-2, 2-Bromoethyl ethyl ether
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2-Bromopropanoic acid 613-45-6, 2,4-Dimethoxybenzaldehyde
                                                             615-20-3,
2-Chlorobenzothiazole 693-07-2, 2-Chloroethyl ethyl sulfide
                                                               1018-97-9,
2,2'-Dimethylbenzophenone
                          1126-78-9, N-Butyl aniline
                                                        1191-99-7,
2,3-Dihydrofuran
                  1196-70-9, Indole-6-carboxaldehyde
                                                       1877-77-6,
3-Aminobenzyl alcohol
                       2032-35-1, Bromoacetaldehyde diethyl acetal
2386-60-9, 1-Butanesulfonyl chloride
                                     2859-68-9, 3-(2-Pyridyl)-propanol
3085-68-5, N,N-Diallyl acrylamide
                                  3179-10-0, 4-(2-Nitrovinyl)anisole
3182-95-4, (S)-Phenylalaninol 3249-68-1, Ethyl butyrylacetate
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3840-30-0, 3,4,5-Trimethoxybenzyl chloride
2,4-Dichloropyrimidine
                        4595-60-2, 2-Bromopyrimidine
tert-Butyl bromoacetate
                         5395-67-5, N-Propyl bromoacetamide
                                                              5416-93-3,
4-Methoxyphenyl isocyanate
                            5695-63-6, 2-Bromomethyl-1,3-dioxane
5780-07-4, 5-Methoxypiperonal
                               6291-85-6, 3-Ethoxypropylamine
7152-15-0, Ethyl isobutyrylacetate
                                    7663-76-5
                                                10035-16-2,
Benzofuran-5-carboxaldehyde
                             10147-36-1, Propylsulfonyl chloride
10147-37-2, 2-Propanesulfonyl chloride
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benzodioxane
              13358-73-1, Dibutylcarbamoyl chloride 15159-40-7,
4-Morpholinocarbonyl chloride
                               18495-25-5, 1-Bromo-2-hexyne
                                                              20261-68-1,
1-Chloro-2-hexanone
                     23590-03-6, N,N-Dibutyl glycine
                                                       24074-26-8,
Diisopropyl (ethoxycarbonylmethyl) phosphonate
                                             34036-07-2,
3,4-Difluorobenzaldehyde 38945-21-0, O-Allylhydroxylamine hydrochloride
                                                    51932-70-8,
42149-74-6, 2-Chloroethyl propyl ether
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Indan-4-carboxaldehyde
                        54149-17-6, 2-(2-Methoxyethoxy) ethyl bromide
55745-70-5, 2,3-Dihydrobenzofuran-5-carboxaldehyde
                                                   63131-29-3, Methyl
(4-fluorobenzoyl)acetate
                          73873-61-7, trans-4-Methoxycyclohexane
carboxylic acid
                81581-27-3, Ethyl (1,3-benzodioxol-5-ylcarbonyl)acetate
90719-32-7, (S)-4-Benzyl-2-oxazolidinone 101498-88-8, Ethyl
(4-tert-butylbenzoyl)acetate 110874-83-4, Methyl 3-oxo-6-octenoate
116169-12-1, Ethyl 3,3-dimethylhexanoate 134414-16-7, N-Butyl-N-methyl
bromoacetamide
                158692-25-2 178609-50-2
                                            178609-64-8,
N-Methyl-N-propyl bromoacetamide
                                  178609-65-9, Ethyl (4-methoxy-2-
(methoxymethoxybenzoyl)acetate 178609-66-0, N-(3,4-Dimethoxybenzyl)
2-bromoacetamide
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RL: RCT (Reactant); RACT (Reactant or reagent)
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111-75-1P, N-Butyl-N-(2-hydroxyethyl)amine
4-Fluoro-3-methylaniline 589-55-9P, 4-Heptanol
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1589-35-1P, trans-5-Methylhex-2-en-1-ol
                                         2881-83-6P
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4-Methyl-3-penten-2-ol
                        4543-95-7P
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6303-18-0P, 1-Pentanesulfonyl chloride
                                        15197-75-8P, 2-Pyridinepropanoic
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Indan-5-carboxaldehyde
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N, N-Dibutylbromoacetamide
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42042-67-1P, N-Butyl-4-hydroxybutyramide
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             89532-73-0P, 3-(1-Pyrazolyl)-propionic acid
81042-10-6P
                                                           90843-31-5P.
5-Acetyl-2,3-dihydrobenzofuran
                                95333-13-4P, Benzofuran-4-carboxaldehyde
100366-94-7P
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                             123297-88-1P, Benzofuran-6-carboxaldehyde
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                             178609-26-2P, 1-Chloro-3-propyl-2-hexanone
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IT

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     (Reactant or reagent)
        (preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-
        carboxylic acid derivs. as endothelin antagonists)
              THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT
(1) Abbott Lab; WO 9606095 A 1996 HCAPLUS
(2) Abbott Lab; WO 9730045 A 1997 HCAPLUS
(3) Abbott Lab; WO 9730046 A 1997 HCAPLUS
(4) Liu, G; J MED CHEM 1999, V42(18), P3679 HCAPLUS
     246853-46-3P 246853-81-6P 246853-83-8P
     403614-24-4P 403614-26-6P 403614-29-9P
     403614-30-2P 403614-31-3P 403614-32-4P
     RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
     (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
     (Uses)
        (preparation of 4-benzoheterocyclyl-1-aminocarbonylmethylpyrrolidine-3-
        carboxylic acid derivs. as endothelin antagonists)
     246853-46-3 HCAPLUS
     3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-
```

methylphenyl) methyl] amino] -2-oxoethyl] -2-(4-methoxyphenyl) -,

(CA INDEX NAME)

Relative stereochemistry.

(2R,3R,4S)-rel- (9CI)

RE

RN

CN

RN 246853-81-6 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-83-8 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

RN 403614-24-4 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, trifluoroacetate (5:2) (9CI) (CA INDEX NAME)

CM 1

CRN 246853-46-3 CMF C36 H36 N2 O6

Relative stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 403614-26-6 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)-rel-, trifluoroacetate (5:1) (9CI) (CA INDEX NAME)

CM 1

CRN 246853-81-6 CMF C38 H40 N2 O7

Relative stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 403614-29-9 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 246853-83-8 CMF C41 H46 N2 O7

Relative stereochemistry.

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 403614-30-2 HCAPLUS

CN 1-Pyrrolidineacetic acid, 4-(1,3-benzodioxol-5-yl)-3-carboxy-2-[4-(2-propoxyethoxy)phenyl]-, α -[2-(1,1-dimethylethyl)-2-phenylhydrazide], (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

RN 403614-31-3 HCAPLUS

CN 1-Pyrrolidineacetic acid, 4-(1,3-benzodioxol-5-yl)-3-carboxy-2-[4-(2-methoxyethoxy)phenyl]-, α -[2-(1,1-dimethylethyl)-2-phenylhydrazide], (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 403614-32-4 HCAPLUS

CN 1-Pyrrolidineacetic acid, 4-(1,3-benzodioxol-5-yl)-3-carboxy-2-[4-(2-methoxyethoxy)phenyl]-, α -[2-(1,1-dimethylethyl)-2-phenylhydrazide], (2R,3R,4S)-rel-, monoacetate (9CI) (CA INDEX NAME)

CM 1

CRN 403614-31-3 CMF C33 H39 N3 O7

Relative stereochemistry.

CM 2

CRN 64-19-7 CMF C2 H4 O2

L64 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN

AN 1999:510837 · HCAPLUS

DN 131:286357

ED Entered STN: 18 Aug 1999

TI Design, Synthesis, and Activity of a Series of Pyrrolidine-3-carboxylic Acid-Based, Highly Specific, Orally Active ETB Antagonists Containing a Diphenylmethylamine Acetamide Side Chain

AU Liu, Gang; Kozmina, Natasha S.; Winn, Martin; von Geldern, Thomas W.; Chiou, William J.; Dixon, Douglas B.; Nguyen, Bach; Marsh, Kennan C.; Opgenorth, Terry J.

CS Metabolic Disease Research and Drug Analysis Department Pharmaceutical Products Division, **Abbott** Laboratories, **Abbott** Park, IL, 60064-6098, USA

SO Journal of Medicinal Chemistry (1999), 42(18), 3679-3689 CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

CC 27-10 (Heterocyclic Compounds (One Hetero Atom))
Section cross-reference(s): 1

GI

$$\mathbb{R}^{2}$$
 \mathbb{C}_{0} \mathbb{R}^{3} \mathbb{C}_{0} \mathbb{R}^{3} \mathbb{C}_{0} \mathbb{C}_{0}

The endothelin (ET)-B receptor subtype is expressed on vascular AB endothelial and smooth muscle cells and mediates both vasodilation and vasoconstriction. On the basis of the pharmacophore of the previously reported ETA-specific antagonist I (R1 = R2 = n-Bu; R3 = MeO) (ABT-627), we are reporting the discovery of a novel series of highly specific, orally active ETB receptor antagonists. Replacing the dibutylaminoacetamide group of I with a diphenylmethylaminoacetamide group resulted in antagonist I (R1 = (C6H5)2CH; R2 = H; R3 = MeO) with a complete reversal of receptor specificity. Structure-activity relationship studies revealed that ortho-alkylation of the Ph rings could further increase ETB affinity and also boost the ETA/ETB activity ratio of the resulting antagonists. A similar antagonism selectivity profile could also be achieved when one of the Ph rings of the acetamide side chain was replaced with an alkyl group, preferably a tert-Bu group I [R1 = C6H5(t-Bu)CH; R2 = H; R3 = MeO]. Combining these features with modification of the 2-aryl group of the pyrrolidine core, we have identified a potent antagonist I [R1 = (2-MeC6H4)2CH; R2 = H; R3 = MeOCH2CH2O] (A-308165) with over 27 000-fold selectivity favoring the ETB receptor and an acceptable pharmacokinetic

```
profile (F = 24%) in rats.
 ST
     pyrrolidinecarboxylic acid prepn endothelin B antagonist; endothelin B
      antagonist structure activity relationship
 TΤ
      Endothelin receptors
      RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
      (Biological study); PROC (Process)
         (ETA; preparation, activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
 IT
      Endothelin receptors
      RL: SPN (Synthetic preparation); PREP (Preparation)
         (ETB, antagonist; preparation, activity, and structure activity relationship
         of pyrrolidine-3-carboxylic acid-based ETB antagonists)
 TT
     Endothelin receptors
     RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL
      (Biological study); PROC (Process)
         (ETB; preparation, activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
 IT
     Structure-activity relationship
         (endothelin receptor-binding; preparation, activity, and structure activity
         relationship of pyrrolidine-3-carboxylic acid-based ETB antagonists)
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     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
      study, unclassified); SPN (Synthetic preparation); BIOL (Biological
      study); PREP (Preparation)
         (preparation, activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
 IT
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      RL: PUR (Purification or recovery); PREP (Preparation)
         (preparation, activity, and structure activity relationship of
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 IT
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      RL: PUR (Purification or recovery); RCT (Reactant); PREP (Preparation);
      RACT (Reactant or reagent)
         (preparation, activity, and structure activity relationship of
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                                                       1485-00-3
 TТ
      100-09-4
                1018-97-9, 2,2'-Dimethylbenzophenone
                                                                     27890-92-2
                    246853-78-1
                                 246853-79-2
                                                246853-84-9
                                                              246853-86-1
      246853-48-5
      246853-87-2
      RL: RCT (Reactant); RACT (Reactant or reagent)
         (preparation, activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
                                                 218271-43-3P
                  173864-45-4P
                                  173864-47-6P
 TT
      2881-83-6P
                                                                 246853-44-1P
                     246853-47-4P
                                    246853-49-6P
                                                   246853-54-3P
                                                                   246853-88-3P
      246853-45-2P
      246853-89-4P
                     246853-90-7P
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation, activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
IT
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      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
         (preparation, biol. activity, and structure activity relationship of
         pyrrolidine-3-carboxylic acid-based ETB antagonists)
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RE.CNT
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RE
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     246853-57-6P 246853-58-7P 246853-60-1P
     246853-61-2P 246853-64-5P 246853-66-7P
     246853-81-6P 246853-82-7P 246853-83-8P
     246853-85-0P
     RL: BAC (Biological activity or effector, except adverse); BSU (Biological
     study, unclassified); SPN (Synthetic preparation); BIOL (Biological
     study); PREP (Preparation)
         (preparation, activity, and structure activity relationship of
        pyrrolidine-3-carboxylic acid-based ETB antagonists)
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     3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-
CN
     methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-,
                            (CA INDEX NAME)
      (2R,3R,4S)-rel- (9CI)
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RN 246853-53-2 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

RN 246853-55-4 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(diphenylmethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

RN 246853-57-6 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(1,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-58-7 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[(2,2-diphenylethyl)amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-(9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-60-1 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-2-(4-methoxyphenyl)-1-[2-[[(2-methylphenyl)phenylmethyl]amino]-2-oxoethyl]-, (2R,3R,4S)-rel-

(9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-61-2 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2,5-dimethylphenyl)phenylmethyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-64-5 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 246853-63-4 CMF C37 H38 N2 O6

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 246853-66-7 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-ethylphenyl)methyl]amino]-2-oxoethyl]-2-(4-methoxyphenyl)-, (2R,3R,4S)-rel-, mono(trifluoroacetate) (9CI) (CA INDEX NAME)

CM 1

CRN 246853-65-6 CMF C38 H40 N2 O6

CM 2

CRN 76-05-1 CMF C2 H F3 O2

RN 246853-81-6 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

RN 246853-82-7 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-83-8 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[(2-ethylphenyl)(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-[2-(1-methylethoxy)ethoxy]phenyl]-, (2R,3R,4S)-rel- (9CI) (CA INDEX NAME)

Relative stereochemistry.

RN 246853-85-0 HCAPLUS

CN 3-Pyrrolidinecarboxylic acid, 4-(1,3-benzodioxol-5-yl)-1-[2-[[bis(2-methylphenyl)methyl]amino]-2-oxoethyl]-2-[4-(2-methoxyethoxy)phenyl]-, (2R,3R,4S)- (9CI) (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

E KESTER J/AU

=> d his

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FILE 'REGISTRY' ENTERED AT 15:12:09 ON 28 JUN 2005

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L10
            155 S E3-E9,E13
                E BOYD S/AU
            101 S E3,E4
L11
                E BOYD STEVE/AU
L12
             60 S E4, E5
                E HUTCHINS C/AU
L13
             70 S E3,E10,E13,E16,E17
                E JAE H/AU
L14
             43 S E5, E13, E14
                E TASKER A/AU
L15
             63 S E3, E8, E9
                E ON GELDERN T/AU
                E VON GELDERN T/AU
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L18
              1 S E4
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                E SORENSEN B/AU
L20
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             40 S E46
                E SZCZEPANKIEWICZ B/AU
L22
             43 S E4-E7
               E HENRY K/AU
              E SZCZEPANKIEWICZ B/AU
             1 S E2
L23
               E HENRY K/AU
L24
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L26
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L27
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L28
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L30
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L31
             15 S E4, E6, E7
               E PADLEY R/AU
L32
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               E ABBOT/PA,CS
L33
            147 S E3,E4
               E ABBOTT/PA,CS
           8778 S E3,E4
           197 S L7
L36
             1 S L9 AND L35
L37
            54 S L8-L34 AND L35
L38
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